

DERWENT-ACC-NO: 1998-143453

DERWENT-WEEK: 199813

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TITLE: Transesterification process - using  
specified catalysts, molar ratios, and conditions

PATENT-ASSIGNEE: ANONYMOUS [ANON]

PRIORITY-DATA: 1998RD-0406010 (January 20, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	
LANGUAGE	PAGES	MAIN-IPC
RD 406010 A 000		February 10, 1998
	C07C 000/00	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
RD 406010A	N/A	
1998RD-0406010	January 20, 1998	

INT-CL (IPC): C07C000/00, C07D000/00

ABSTRACTED-PUB-NO: RD 406010A

BASIC-ABSTRACT:

The process includes (A) forming a reaction mixture of an alcohol, a polymerisation inhibitor, an acrylate or methacrylate, and a catalyst, with a mole ratio of alcohol to acrylate or methacrylate of from 1:1 to 1:20; (B) reacting the mixture A) at 60 deg. - 140 deg. C. and pressure 400 mm Hg - 760 mm Hg; and (C) removing solvent, acrylate, and/or methacrylate and reaction by-products azeotropically to provide the desired monomer. The alcohol utilised has a structure of the formula R-OH, wherein R is

8 - 24C alkyl;  
- (OCH<sub>2</sub>CHXCH<sub>2</sub>)<sub>a</sub>-(CH<sub>2</sub>)<sub>b</sub>CH<sub>3</sub>, where a = 2 = 26, b = 7 = 23, and X is H or methyl,  
provided both X substituents are not methyl at the same time; a substituent of formula (I) or (II). A and B = 2 - 5 C alkylene.

The acrylate or methacrylate is generally a 1-8C branched or straight chain alkyl acrylate or methacrylate. Suitable polymerisation inhibitors include diethylhydroxylamine, p-methoxy phenol, hydroquinone, phenothiazine, 4-hydroxy tetra methyl piperidinyloxy, and mixtures and derivatives thereof. The amount of inhibitor is 10 - 10,000 parts per million based on the alcohol charge. The catalyst added may be dibutyl tin oxide, dibutyl tin dimethoxide, or reaction products of dibutyl tin oxide or dibutyl tin dimethoxide with components in the transesterification of various alcohols with methyl acrylate or methacrylate or other alkyl acrylates or methacrylates, titanium alkoxides such as titanium butoxide, titanium ethylhexoxide, titanium methoxide, titanium ethoxide, titanium iso-propoxide, etc.; titanium chelates such as Ti chelated with dicarbonyl compounds like 2,4-pentanedione, and methanolic magnesium methylate, and alkali and alkaline earth metal hydroxides/alkoxides/hydrides. The amount of the catalyst added is 0.1 - 10 mole percent.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: TRANSESTERIFICATION PROCESS SPECIFIED CATALYST  
MOLAR RATIO

CONDITION

DERWENT-CLASS: A14 E19

CPI-CODES: A01-D10; A02-C; A10-E07B; E05-F01; E05-L01;

CHEMICAL-CODES:

Chemical Indexing M3 \*01\*  
Fragmentation Code